MonPE15

Beam dynamics simulations of post Low Energy Beam Transport section in RAON heavy ion accelerator

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RAON heavy ion accelerator of the Rare Isotope Science Project (RISP) in Daejeon, Korea, has been designed to accelerate multiple-charge-state beams for various science programs. In the RAON accelerator, the rare isotope beams which are generated by an Isotope Separation On-Line (ISOL) system with a wide range of nuclei and charges will be transported through the post Low Energy Beam Transport (LEBT) section to the Radio Frequency Quadrupole (RFQ). To transport many kinds of rare isotope beams stably to the RFQ, the post LEBT should be designed to keep the small twiss parameters and to satisfy the requirement of RFQ at the end of post LEBT. We will present the recent lattice design of the post LEBT in RAON accelerator and the result of the beam dynamics simulations. In addition, the error analysis and correction in the post LEBT will be also described.